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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/651,458

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Shunpei Yamazaki

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7590

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EXAMINER

LE, THAO X

ART UNIT

PAPER NUMBER

2814

DATE MAILED: 10/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/651,458

Applicant(s)

YAMAZAKI ET AL.

Examiner

Thao X Le

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 13 September 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 18-43 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 18-43 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☒ Certified copies of the priority documents have been received in Application No. 09/517,542.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>09/22/03&amp;11/17/03</u> | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Specification*

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claim 42 is rejected under 35 U.S.C. 102(e) as being anticipated by US 6157429 to Miyawaki et al.

Regarding claim 42, Miyawaki discloses a display device in fig. 3 comprising: a silicon substrate 1, an insulating layer 6 formed on the silicon substrate 1; a field effect transistor 4 formed on the insulating layer 6; an interlayer insulating film 9 formed over the field effect transistor 4; an EL element 14 formed on the interlayer insulating film 9, the EL element 12/14/15 comprising a pair of electrodes 15/12, column 13 line 47, and an EL layer interposed therebetween, wherein one of the pair of electrodes 12 is electrically connected to the field effect transistor 4, fig. 3.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 18-41 and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 6157429 to Miyawaki et al. in view of US 6583057 to Alluri et al.

Regarding claims 18, 19, Miyawaki discloses a display device in fig. 3 comprising: a silicon substrate 1, column 12 line 26, an insulating layer 6, column 12 line 5, formed on the silicon substrate, a field effect transistor 4, column 12 line 28, formed on the insulating layer (the formation of insulating layer and FET can also be seen in fig. 11a-11e), a dielectric film 8', column 12 line 56, formed over the field effect transistor, a light shielding layer 7, column 12 line 62, formed over the dielectric film; a dielectric layer 9, column 13 line 27, formed on the light shielding layer; and a pixel electrode 12', column 12 line 60, formed on the dielectric layer.

But, Miyawaki does not expressly disclose the resin film at least one selected from the group consisting of polyimide over the field effect transistor.

However, Miyawaki discloses the dielectric layer 8' comprising PSG, column 12 line 565. And Alluri reference discloses the dielectric layer 210 in fig. 6 comprises PSG or polyimide (resin film), column 2 lines 35-40. At the time of the invention was made; it would have been obvious to one of ordinary skill in the art to replace the PSG layer of Miyawaki with polyimide layer use the polyimide dielectric layer teaching of Alluri, because such material substitution would have been considered a mere substitution of art-recognized equivalent values, MPEP 2144.06.

Regarding claims 20, 26, 32, 38, Miyawaki discloses the display device wherein the light shielding layer 7 comprises at least one selected from the group consisting of aluminum, titanium, and tantalum, column 12 line 64.

Regarding claims 21-22, 27-28, 33-34, and 39-40, Miyawaki disclose a display device wherein the dielectric layer 9 comprises at least one selected from the group consisting of silicon oxide, silicon nitride, silicon oxynitride, DLC (Diamond like carbon), and polyimide, column 8 line 17, wherein the pixel electrode 12' comprises aluminum, column 8 line 8.

Regarding 23, 28, 35, 41, and 43, Miyawaki does not disclose a display device wherein the display device is one selected from the group consisting of a portable telephone, a video camera, a mobile computer, a goggle type display, a projector, an electronic book, a digital camera, and a DVD player. At the time the invention was made; it would have been obvious to one of ordinary skill in the art to use the teaching of Miyawaki as claimed for intended used, MPEP 2144.07.

Regarding claims 24-25, Miyawaki discloses a display device in fig. 3 comprising: a silicon substrate 1, column 12 line 26, an insulating layer 6, column 12 line, formed on the silicon substrate, a field effect transistor 4, column 12 line 28, formed on the insulating layer, a dielectric film 8', column 12 line 56, formed over the field effect transistor, a light shielding layer 7, column 12 line 62, formed over the dielectric film; a dielectric layer 9, column 13 line 27, formed on the light shielding layer; and a pixel electrode 12', column 12 line 60, formed on the dielectric layer, wherein a storage capacitance is formed by the light shielding layer 7, the dielectric layer 9, and the pixel electrode 12', column 13 line 25.

But, Miyawaki does not expressly disclose the resin film at least one selected from the group consisting of polyimide over the field effect transistor.

However, Miyawaki discloses the dielectric layer 8' comprising PSG, column 12 line 565. And Alluri reference discloses the dielectric layer 210 in fig. 6 comprises PSG or polyimide (resin film), column 2 lines 35-40. At the time of the invention was made; it would have been obvious to one of ordinary skill in the art to replace the PSG layer of Miyawaki with polyimide layer use the polyimide dielectric layer teaching of Alluri, because such material substitution would have been considered a mere substitution of art-recognized equivalent values, MPEP 2144.06.

Regarding claims 30-31, Miyawaki discloses a display device in fig. 3 comprising: a pair of substrates 1/16, column 13 line 46 wherein one of the pair of substrates comprises a silicon substrate 1, and a liquid crystal material 14, column 13 line 36, is interposed between the pair of substrates 1/16, fig. 3, an insulating layer 6, column 12 line, formed on the silicon substrate, a field effect transistor 4, column 12 line 28, formed on the insulating layer, a dielectric film 8',

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column 12 line 56, formed over the field effect transistor, a light shielding layer 7, column 12 line 62, formed over the dielectric film; a dielectric layer 9, column 13 line 27, formed on the light shielding layer; and a pixel electrode 12', column 12 line 60, formed on the dielectric layer, wherein a storage capacitance is formed by the light shielding layer 7, the dielectric layer 9, and the pixel electrode 12', column 13 line 25.

But, Miyawaki does not expressly disclose the resin film at least one selected from the group consisting of polyimide over the field effect transistor.

However, Miyawaki discloses the dielectric layer 8' comprising PSG, column 12 line 565. And Alluri reference discloses the dielectric layer 210 in fig. 6 comprises PSG or polyimide (resin film), column 2 lines 35-40. At the time of the invention was made; it would have been obvious to one of ordinary skill in the art to replace the PSG layer of Miyawaki with polyimide layer use the polyimide dielectric layer teaching of Alluri, because such material substitution would have been considered a mere substitution of art-recognized equivalent values, MPEP 2144.06.

Regarding claims 36-37, Miyawaki discloses a display device comprising: a pair of substrates 1/16, fig. 3, wherein one of the pair of substrates comprises a silicon substrate 1, and a liquid crystal material 14 is interposed between the pair of substrates, an insulating layer 6, column 12 line, formed on the silicon substrate, a field effect transistor 4, column 12 line 28, formed on the insulating layer, a dielectric film 8', column 12 line 56, formed over the field effect transistor, a light shielding layer 7, column 12 line 62, formed over the dielectric film; a dielectric layer 9, column 13 line 27, formed on the light shielding layer; and a pixel electrode 12', column 12 line 60, formed on the dielectric layer, wherein a storage capacitance is formed

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by the light shielding layer 7, the dielectric layer 9, and the pixel electrode 12', column 13 line 25, wherein a storage capacitance is formed by the light shielding layer 7, the dielectric layer 9, and the pixel electrode 12', column 13 line 25.

But, Miyawaki does not expressly disclose the resin film at least one selected from the group consisting of polyimide over the field effect transistor.

However, Miyawaki discloses the dielectric layer 8' comprising PSG, column 12 line 565. And Alluri reference discloses the dielectric layer 210 in fig. 6 comprises PSG or polyimide (resin film), column 2 lines 35-40. At the time of the invention was made; it would have been obvious to one of ordinary skill in the art to replace the PSG layer of Miyawaki with polyimide layer use the polyimide dielectric layer teaching of Alluri, because such material substitution would have been considered a mere substitution of art-recognized equivalent values, MPEP 2144.06.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thao X Le whose telephone number is (571) 272-1708. The examiner can normally be reached on M-F from 8:00 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wael M Fahmy can be reached on (571) 272 -1705. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Thao X. Le  
22 Oct. 2004



LONG PHAM  
PRIMARY EXAMINER